

CEWEP Ireland views on draft Regulation amending Annex III to Directive 2008/98/EC – HP 14

Key points:

- The draft Regulation should use a risk-based approach to assess the ecotoxicity of waste.
- The four methodologies analysed in the BIO by Deloitte report are unsuitable for measuring the ecotoxicity of waste.
- They are based on incomplete data – less than 15% of the content is known for 80% of the samples tested.
- The default M-factor could dramatically change and bring the stability of the results into question.

Introduction

The recent revision of EU waste legislation updated and defined the 15 hazard properties of waste except for HP 14 which measures ecotoxicity of waste. The lack of a common EU-wide methodology to assess the ecotoxic property of waste prompted the European Commission to appoint *BIO by Deloitte* (BIO) to conduct a comparative analysis of four calculation methods.

The report aims to assess the impacts of the implementing the four calculation methods for measuring HP 14. However CEWEP Ireland considers the results to be flawed given the limited samples, unsuitable classifying methodologies and incomplete datasets.

The purpose of this draft Regulation amending Annex III to Directive 2008/98/EC (draft Regulation) is to make the necessary revisions so as to account for HP 14. The method used to assess the ecotoxic properties of waste is based on a combination of elements from two of the methods analysed in the BIO report.

However, none of the proposed methods outlined in the report are appropriate for assessment purposes. A risk-based approach, based on composition analysis followed by geochemical speciation and bio availability, is the most appropriate indicator to assess the ecotoxicology effects of bottom ash on the environment.

CEWEP Ireland appreciates the opportunity to provide comments on the Commission Regulation amending Annex III to Directive 2008/98/EC (draft Regulation).

About CEWEP Ireland

CEWEP (Confederation of European Waste-to-Energy Plants) is an industry body that represents circa. 400 Waste-to-Energy Plants across Europe.

CEWEP Ireland is the Irish branch of CEWEP Europe. We assist in the informed development of policy to ensure the benefits of Waste-to-Energy are recognised as part of an integrated approach to waste management.

Since 2011, CEWEP Ireland members have been recovering residual waste in Ireland, exporting 17MW of electricity and creating 45 jobs. A further 600,000 tpa facility is now under construction which will export 60MW of electricity and by 2020 it is anticipated that members will have a total treatment capacity of over 1,070,000 tonnes per annum residual waste, employing over 200 persons, and exporting more than 90MW electricity and/or heat. This would divert nearly all residual waste away from landfill in Ireland. Collectively these facilities will be producing c.200,000 tonnes of Incinerator Bottom Ash (IBA) per annum.

Background

Annex III in to the Directive 2008/98/EC on waste defined HP 14 as ‘waste which presents or may present immediate or delayed risks for one or more sectors of the environment’.¹² This was replaced by Commission Regulation 1357/2014 which outlines the properties which render waste hazardous. However, the revised waste legislation, which entered into force in June 2015 did not include amendments to the HP 14 property because no satisfactory methodology could be developed and assessed in time. According to the Regulation HP 14 or “ecotoxic” is the ecological potential of waste, which presents or may present immediate or delayed hazards for one of more sectors of the environment.

BIO by Deloitte prepared *A Study to assess the impacts of the different classification approaches for hazard property “HP 14” on selected waste streams*.³ The study, necessitated by the revised waste legislation, is an attempt to develop an EU-wide methodology to assess the ecotoxicity of waste and includes the results of four calculation methods. They differ by the hazard statement codes, concentration limits and the use of M-factors.

The Regulation also stated it necessary to amend Annex III to Directive 2008/98/EC to adapt the definitions of the hazardous properties and align them with the Regulation on the classification, labelling and packaging of substances and mixtures (CLP Regulation).⁴ As there are currently no guidelines or EU-wide harmonised methodology for the assessment of HP 14, the Regulation included a recommendation to conduct a study in order to assess the impacts of an alignment of HP 14 ‘ecotoxic’ with the CLP Regulation. However, at this stage it must be noted there is a difficulty in aligning the definitions for hazardous properties with the scope of the CLP. Article 1(3) of the CLP Regulation states that waste is not considered a substance, mixture or an article. It is designed for mixtures and substances of a known composition; it is not suitable for a heterogeneous waste materials.

Methodology

- **The assessment is based on incomplete data – less than 15% of the content is known for 80% of the samples tested.**
- **The default M-factor could dramatically change and brings the stability of the results into question.**

In 2015, a revised European List of Waste (LoW) was introduced in an effort to provide a reference nomenclature for the classification of waste and a common terminology throughout the EU.⁵ The

² Directive 2008/98/EC, <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0098&from=EN>

³ <http://ec.europa.eu/environment/waste/studies/pdf/hazard%20property.pdf>

⁴ Regulation (EC) No 1272/2008, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:353:0001:1355:en:PDF>

⁵ Decision 2014/955/EU, <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014D0955&from=EN>

LoW comprises 839 waste codes, divided into 20 waste chapters including about 200 wastes in “mirror pairs”. One of the wastes in the ‘mirror pair’ may be classified as hazardous or non-hazardous depending on the type and concentration of pollutants.⁶ However, for the samples used for the purposes of the study, the limited data availability and incomplete chemical data cause a problematic basis for analysis.

HP 14 assessment is performed in different ways throughout EU Member States; there are no EU-wide guidelines or recommendations for a specific methodology. A comparison of the results across the four categories were aggregated, even though the samples were provided by five Member States with different calculation methodologies. Differences in national legislation or treatment guidelines could have a distortive impact on the results.

The results of the impact assessment are based on a very limited dataset: less than 15% of the content is known for 80% of the samples used while reference data was only available for a limited number chemicals. Furthermore the M-factor of most of the chemical substances is not yet clear and is subject to change. The M-factor is a multiplying factor and is applied to the concentration of a substance classified as hazardous, and is used to derive by the summation method the classification of a mixture in which the substance is present.⁷ While a default M-factor of 1 is used for the study, this will change and substances could in reality reach 10, 100, 1000 or 1,000,000.⁸

What methodology should be used?

- **The four methods outlined in the report are unsuitable for measuring the ecotoxicity of waste.**

The draft Regulation is based on a combination of elements from two of the methods analysed in the BIO report, based on method 1 and using cut-off values from method 2.

The report recommended using method 1 for waste classification given its relevance to classification based on characterisation data and its use of the same criteria for the CLP Regulation. While this method may be one of the simplest to apply from an administrative perspective, it is in danger of incorrectly classifying incinerator bottom ash (IBA).

Annex III of the Waste Framework Direct included a cut-off value for individual substances present if below a determined limit for the assessment of hazardous properties.⁹ Method 1 as outlined in the

⁶ Bio by Deloitte, Ineris, *Study to assess the impacts of different classification approaches for hazard property "HP 14" on selected waste streams - Final report*, November 2015

⁷ Bipro, *Final Report on a study to develop a guidance document on the definition and classification of waste*, December 2015, <http://ec.europa.eu/environment/waste/studies/pdf/hazard%20property.pdf>

⁸ Eurelectric, *Study to assess the impacts of different classification approaches for hazard property*

⁹ Bipro, *Final Report on a study to develop a guidance document on the definition and classification of waste*, December 2015

BIO report could easily overestimate the hazardous properties in the case of complex waste composition and could lead to the classification of almost all IBA as hazardous. Further limits to the methods examined in the report relate to suggestions to use the CLP's classifying methodology. It is unsuitable for waste as it is specifically designed for substances of a known composition. The exact composition of incinerator IBA can be hard to measure given the variable specifications of metals.

All of the proposed methods are limited in their accuracy, scope and comparability and fail to provide an appropriate calculation methodology for HP assessment. CEWEP Ireland cannot support any of the proposed methods outlined in the study. The European Commission should instead pursue a risk-based approach based on the safe application of secondary materials.

What is the right approach?

- **The European Commission's proposal should use a risk-based approach to assess the ecotoxicity of waste.**

A risk-based approach, based on composition analysis followed by geochemical speciation and bio availability, is the most appropriate indicator. The introduction of a sweeping administrative classification is not suitable as the exact composition of IBA can be hard to measure; for example the incineration fuel can often lead to a large degree of variation. Furthermore, certain substances are not (and cannot be) proven to be present in IBA but since it can also not be proven that they are not present, the risk-based approach is the most suitable way to assess HP 14. The introduction of a generalised methodology based on flawed data could have the effect landfilling large volumes of secondary raw material streams.

Assessment of HP 14 should follow a risk-based approach and should be dependent upon the type of waste, the type of information available for the waste, its components and the recovery application.

What does this mean for Ireland?

Failure to follow a risk-based approach and implement an appropriate methodology for assessing HP 14 of IBA could have serious environmental and cost implications. Although CEWEP has referenced the potential impact on IBA there are also probable impacts on numerous other waste types including stones and soils, wood processing waste, packaging waste, dredging spoil, sludges from treatment of industrial waste water to name but a few.

In the event that these wastes are incorrectly assessed as ecotoxic then they will need to be disposed of in hazardous waste treatment facilities. Ireland does not have the required level of hazardous landfill capacity, which would necessitate export for treatment and/or disposal. This will have significant cost implications for the sector; in many cases these costs will ultimately be borne by householders and industry.